**To:** Rodrigo Jurado[rjurado@pgei.com]
**Cc:** Breffle, Don[Breffle.Don@epa.gov]; Pardue-Welch, Kimberly[Pardue-Welch.Kimberly@epa.gov]; Suchomel, Bruce[Suchomel.Bruce@epa.gov]; Gallant, William[Gallant.William@epa.gov]
**From:** Wang, Gary
**Sent:** Fri 9/11/2015 8:35:16 PM
**Subject:** Step rate test for Petroglyph's Ute Tribal 29-12 injection Well (EPA ID UT20736-04523

HI Rodrigo,

Per our conversation yesterday, Petroglyph submitted a step-rate test for the Ute Tribal 29-12 injection well in July 1, 2015. The step rate test conducted by Petroglyph was performed in two test events. The first event was conducted with fluid injected from the water plant pump, and a slope of a plot of pressure versus rate showed that the injection pressure remained below fracture parting pressure. The second event was conducted several weeks later with water injected from a hot oiler truck and a second slope was generated and assumed to be above fracture parting pressure because of the result of a different slope. The intersection for the two slopes were assumed by Petroglyph to be the well's surface fracture pressure.

Based on the review of the data, EPA is not approving the step rate test results based on the following reason:

•□□□□□□□ A breakdown point was not observed in either event. Because of the two separate events, the result from Petroglyph appear as two disparate slopes used to extrapolate the fracture pressure. Additionally, experimental conditions (e.g., fluid characteristics) may have changed between the two testing events.

We would like to see the step rate test be retested with the following conditions:

•□□□□□□□ The step rate test is to be conducted where the plot of the pressure versus rate is experimentally collected in one continuous event, beginning from below the fracture parting pressure, through the breakdown point, and into the above fracture parting pressure.

•□□□□□□□ After additional discussion with others in the office, we would also like to see both surface and bottom-hole pressures to be observed during the step rate test.

Please let me know if you have any questions.

Gary Wang
Underground Injection Control Enforcement

U.S. Environmental Protection Agency
1595 Wynkoop St.
Denver, CO 80202
PH: 303-312-6469
FAX: 303-312-6953
EMAIL: wang.gary@epa.gov